APPENDIX I:

THE LISTING OF CLAIMS:

- 1. (previously presented) An epoxide hydrolase (E.C. 3.3.2.3) from a microorganism of the genus Streptomyces.
- 2. (original) An epoxide hydrolase as claimed in claim 1, having at least one of the following properties:
 - a) hydrolytic epoxide cleavage of a styrene oxide and of at least one other compound selected from ethyl 3-phenylglycidates, n-hexane-1,2-oxides, n-decane-1,2-oxides and indene oxides;
 - b) conversion of a racemate of styrene oxide with an enantiose-lectivity $E \ge 2$ to give (S)-phenyl-1,2-ethanol.
- 3. (previously presented) An epoxide hydrolase isolated from bacteria of the genus Streptomyces from the species Streptomyces griseus, Streptomyces thermovulgaris, Streptomyces antibioticus, Streptomyces arenae and Streptomyces fradiae.
- 4. (canceled)
- 5. (previously presented) A process for separating epoxide enantiomer mixtures, which comprises
 - a) incubating an epoxide enantiomer mixture, which comprises an epoxide hydrolase substrate, with an epoxide hydrolase as claimed in claim 1, a microorganism of the genus Streptomyces, an epoxide hydrolase-containing homogenate thereof, or a fraction of this homogenate;
 - b) converting the enantiomeric mixture; and
 - c) fractionating the reaction mixture.
- 6. (previously presented) A process as claimed in claim 5, wherein an enantiomeric mixture of an epoxide is converted, which mixture is selected from the group consisting of styrene oxides, 3-phenylg-lycidate, hexane-1,2-oxides, decane-1,2-oxides and indene oxides.
- 7. (previously presented) A detection method for epoxide hydrolase, which comprises
 - a) incubating an analyte in which epoxide hydrolase activity is suspected with an epoxide-containing substrate for the hydrolase under reaction conditions, wherein the analyte is a bac-

- terium of the genus *Streptomyces*, a homogenate therefrom or a fraction of this homogenate;
- b) carrying out a color reaction with the epoxide remaining unreacted in stage a) in the presence of 4-nitrobenzylpyridine (NBP) to form a pigment; and
- c) analyzing the solution from step b) for a decrease in pigment concentration, relative to an epoxide hydrolase-free control solution.
- 8. (original) A method as claimed in claim 7, wherein the relative decrease in pigment concentration is determined quantitatively and the epoxide hydrolase activity in the analyte is determined therefrom.
- 9. (canceled)
- 10. (canceled)
- 11. (previously presented) A method as claimed in claim 7, wherein the epoxide-containing substrate is selected from the group consisting of styrene oxide, 3-phenylglycidate, hexane-1,2-oxide and indene oxide, each of which group members being employed in enantiometric pure form or as an enantiometric mixture.
- 12. (previously presented) A screening method for detecting microorganisms having epoxide hydrolase activity, or having the ability for the enantioselective hydrolysis of epoxides, comprising a detection method as claimed in claim 7.
- 13. (previously presented) A method for the enantioselective hydrolysis of epoxides, which comprises reacting an enantiomeric mixture of epoxides with an epoxide hydrolase as claimed in claim 1, a microorganism of the genus Streptomyces, an epoxide-hydrolase-containing homogenate thereof or a fraction of this homogenate to obtain a reaction mixture comprising non-reacted epoxide and a hydroxyide, and isolating the non-reacted epoxide or the hydroxide, or both from the reaction mixture.
- 14. (canceled)
- 15. (previously presented) A process for producing epoxide hydrolases (E.C. 3.3.2.3), which comprises
 - a) producing a cell homogenate from a culture of a microorganism of the genus Streptomyces;

- fractionating the homogenate obtained in stage a), and testing the resultant fractions for epoxide hydrolase activity; and
- combining fractions having epoxide hydrolase activity, and C) optionally further fractionating the combined fractions.
- 16. (previously presented) The epoxide hydrolase of claim 3, wherein the bacteria of the genus Streptomyces are selected from the strains Streptomyces griseus (DSM 40236 and DSM 13447), Streptomyces thermovulgaris (DSM 40444 and DSM 13448), Streptomyces antibioticus Tü4 (DSM 12925), Streptomyces arenae Tü495 (DSM 40737 and DSM 12134) and Streptomyces fradiae Tü27 (DSM 12131).
- 17. (currently amended) The process of claim 5, wherein the conversion of stage (b) is allowed to proceed until reaction equillibrium equilibrium is established before proceeding to stage (c).
- 18. (previously presented) The process of claim 15, wherein the resultant fractions are tested for epoxide hydrolase activity by a method which comprises
 - incubating an analyte in which epoxide hydrolase activity is a) suspected with an epoxide-containing substrate for the hydrolase under reaction conditions, wherein the analyte is a bacterium of the genus Streptomyces, a homogenate therefrom or a fraction of this homogenate;
 - b) carrying out a color reaction with the epoxide remaining unreacted in stage a) in the presence of 4-nitrobenzylpyridine (NBP) to form a pigment; and
 - analyzing the solution from step b) for a decrease in pigment concentration, relative to an epoxide hydrolase-free control solution.
- 19. (previously presented) The process of claim 18, wherein the relative decrease in pigment concentration is determined quantitatively and the epoxide hydrolase activity in the analyte is determined therefrom.
- 20. (previously presented) The process of claim 18, wherein the epoxidecontaining substrate is selected from the group consisting of styrene oxide, 3-phenylglycidate, hexane-1,2-oxide and indene oxide, each of which group members being employed in enantiomeric pure form or as an enantiomeric mixture.

21. (previously presented) The process of claim 18, wherein the bacteria of the genus Streptomyces are selected from the strains Streptomyces griseus (DSM 40236 and DSM 13447), Streptomyces thermovulgaris (DSM 40444 and DSM 13448), Streptomyces antibioticus Tü4 (DSM 12925), Streptomyces arenae Tü495 (DSM 40737 and DSM 12134) and Streptomyces fradiae Tü27 (DSM 12131).